

CLAIMS

What is claimed is:

- 5 1. A method of controlling a vacuum gauge, the method comprising:
 determining that a potentially dangerous condition may be
 present in a vacuum system; and
 preventing a vacuum gauge from being turned on.
- 10 2. A method according to Claim 1 wherein the vacuum gauge is a
 pressure gauge.
3. A method according to Claim 2 wherein the pressure gauge is a
 thermocouple vacuum pressure gauge.
- 15 4. A method according to Claim 1 wherein the vacuum gauge is coupled to
 a cryopump.
5. A method according to Claim 4 wherein a potentially dangerous
 condition is not present when a temperature of a second stage of the
20 cryopump is below a temperature set point.
6. A method according to Claim 5 wherein the temperature set point is
 20K.
- 25 7. A method according to Claim 4 wherein a potentially dangerous
 condition is not present when the cryopump is substantially filled with
 inert gas.
- 30 8. A vacuum system comprising:
 a vacuum pump;

a pressure gauge coupled to the vacuum pump; and
an electronic controller in communication with the pressure
gauge and the vacuum pump, the controller responding to a potentially
dangerous condition that may be present in the vacuum pump by
preventing the vacuum gauge from being turned on.

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9. A vacuum system as in Claim 8 wherein the pressure gauge is a
pressure gauge.

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10. A vacuum system as in Claim 9 wherein the pressure gauge is a
thermocouple vacuum pressure gauge.

11. A vacuum system as in Claim 8 wherein the vacuum pump is a
cryopump having first and second stage arrays.

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12. A vacuum system as in Claim 11 wherein the potentially dangerous
condition is not present when the second stage array of the vacuum pump
is below a temperature set point.

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13. A vacuum system as in Claim 12 wherein the temperature set point is
20K.

14. A vacuum system as in Claim 8 wherein a potentially dangerous
condition is not present when the vacuum pump is substantially filled
with purge gas.

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15. A vacuum system as in Claim 8 further includes using a vacuum gauge
interlock to prevent the vacuum gauge from being turned on.

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16. A vacuum system comprising:

means for determining that a potentially dangerous condition may be present in a vacuum system; and

means for responding to the potentially dangerous condition by preventing a vacuum gauge from being turned on.